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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/642,640 | 08/19/2003 | Fumihiko Nakazawa | 030931 | 3730 |

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| EXAMINER | |
|---|---|
| AMADIZ, RODNEY | |
| **ART UNIT** | **PAPER NUMBER** |
| 2675 | |

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/642,640 | NAKAZAWA ET AL. | |
| | Examiner | Art Unit | |
| | Rodney Amadiz | 2675 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *8/19/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/19/03 & 8/01/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

1. Claim 1, objected to because of the following informalities: Line 6, replace "planner" with –planar—. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 6, 9, 10, 14 and are rejected under 35 U.S.C. 102(e) as being anticipated by Masuda (USPGPUB 2002/0172031).

As to claim 1, Masuda teaches a touch panel device comprising: a touch panel for detecting a touched position (See Figs. 15d and 24 and note reference numbers 32, 33, 34, 36 and 38 which constitute a touch panel); and a lighting device including a light source (Fig. 24, reference number 10), a light guiding part on which light is incident from said light source (Fig. 24, reference number 20b), and a light guiding and emitting part for guiding light propagated through said light guiding part so as to emit the light as planar light to an outside (Fig. 24, reference numbers 20a and 25), wherein the light to be guided to the outside from said light guiding and emitting part is emitted from a side opposite to a side on which the touched position is to be detected (See Fig. 24, note that 20a, 26 and 25 are on the opposite side from which the touch position is detected).

As to claim 4, Masuda teaches said light guiding and emitting part is a step-like structure formed on said light guiding part (Pg. 10, ¶ 153).

As to claim 6, Masuda teaches an optical refractive index of said light guiding and emitting part that is not less than an optical refractive index of said light guiding part (See Pg. 4, ¶ 76).

As to claim 9, Masuda teaches said light guiding and emitting part is a plurality of grooves formed in said light guiding part (See Figs 15A-15D and Fig. 24 and note reference numbers 25 and 26a1).

As to claim 10, Masuda teaches a formation direction of said grooves forms an angle of 35 degrees to 55 degrees with respect to a normal direction of a face of said light guiding part (See Pg. 12, ¶ 181).

As to claim 14, Masuda teaches an adhesive agent layer (Fig. 24, Adhesive Layer 28) for bonding said substrate of said touch panel and said light guiding part of said lighting device together (See Masuda-Pg. 9, ¶ 148).

As to claim 15, Masuda teaches the optical refractive indices of said substrate, said light guiding part, and said adhesive agent layer are indicated by n1 n2, and n3, respectively, the optical refractive indices n1 n2, and n3 satisfy the following conditions: n1.apprxeq.n3.apprxeq.n2 (See Masuda-Pg. 12, ¶ 180).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 3, 12, 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda in view of An (USPGPUB 2002/0154250).

As to claim 3, Masuda teaches a touch panel (See Figs. 15d and 24 and note reference numbers 32, 33, 34, 36 and 38); however, he does not state whether the touch panel is resistive. Examiner cites An to teach a resistive touch panel wherein said touch panel senses a change in resistance of a resistance film due to a touch of an object with said resistance film so as to detect a position where the object is touched (See Figs 7 and 8 and ¶'s 45-47). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a resistive touch pad as taught by An in the touch pad taught by Masuda in order to reduce the manufacturing cost of the touch panel.

As to claims 2 and 16, Masuda teaches a light source for emitting light which is to be incident on said substrate (Fig. 24, reference number 10); and a light guiding and emitting part for guiding the light incident on said substrate from said light source so as to emit the light to an outside (Fig. 24, reference numbers 20a and 25). Masuda, however, does not teach a touch panel device in which an ultrasonic wave is propagated through an optically transparent substrate and a change in a propagation

state of the ultrasonic wave due to a touch of an object with said substrate is sensed to detect a position where the object is touched. Examiner cites An to teach a touch panel device in which an ultrasonic wave is propagated through an optically transparent substrate and a change in a propagation state of the ultrasonic wave due to a touch of an object with said substrate is sensed to detect a position where the object is touched (See Fig. 11 and ¶ 59). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the use of an ultrasonic touch pad as taught by An in the touch pad taught by Masuda in order to produce a touch panel with good optical quality.

As to claim 17 the modified touch panel of Masuda and An teaches said light guiding and emitting part configured so that the light incident on said substrate from said light source is guided and emitted to the outside from a face of said substrate opposite to a face where the touched position is to be detected (Masuda—See Fig. 24, note that 20a, 26 and 25 are on the opposite side from which the touch position is detected).

As to claim 12, Masuda teaches an adhesive agent layer (Fig. 24, Adhesive Layer 28) for bonding said substrate of said touch panel and said light guiding part of said lighting device together (See Masuda-Pg. 9, ¶ 148).

As to claim 13, Masuda teaches the optical refractive indices of said substrate, said light guiding part, and said adhesive agent layer are indicated by n1 n2, and n3, respectively, the optical refractive indices n1 n2, and n3 satisfy the following conditions: n1.apprxeq.n3.apprxeq.n2 (See Masuda-Pg. 12, ¶ 180).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda in view of Kubo et al. (U.S. Patent 6,456279).

6. As to claim 11, Masuda does not teach said light guiding and emitting part is a plurality of prisms formed on said light guiding part. Examiner cites Kubo et al. to teach a plurality of prisms formed on said light guiding part (See Fig. 7, note micro-prisms 8 and Col. 10, lines 15-24). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form a plurality of prisms on a light guide plate as taught by Kubo et al. in the touch panel taught by Masuda in order to reflect the light of a touch panel light with high efficiency (Kubo—Col. 9, lines 11-20).

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda in view of Fumiaki et al. (JP06-235917).

As for claim 7, Masuda does not teach said light guiding and emitting part is a plurality of protrusions formed on said light guiding part. Examiner cites Fumiaki et al. to teach said light guiding and emitting part is a plurality of protrusions (Fig. 1, factor portions 28) formed on said light guiding part (14). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the light guiding and emitting part of a plurality of protrusions as taught by Fumiaki et al. into the touch panel taught by Masuda in order to effectively reflect the light off of the protrusions so that a high luminance thin type lighting system may be produced.

As for claim 8, the modified touch panel of Masuda and Fumiaki et al. teaches

an optical refractive index of said protrusions that is not less than an optical refractive index of said light guiding part (Fumiaki-See abstract).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda in view of Nakabayashi et al. (USPGPUB 2001/0019479).

As to claim 5, Masuda does not teach a formation direction of the step-like structure forms an angle of not more than 32.5.degree. with respect to a normal direction of a face of said light guiding part. Examiner cites Nakabayashi et al. to teach a formation direction of the step-like structure forms an angle of not more than 32.50 degrees with respect to a normal direction of a face of said light guiding part (See Fig. 43 and Pg. 19, ¶ 335). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form angles of no more than 32.50 degrees as taught by Nakabayashi et al. in the touch panel taught by Masuda in order to direct the unrequested reflected light outside the angle of visibility (See Nakabayashi et al. Pg. 19, ¶ 335).

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner cites the following references as pertinent to the disclosure due to their relevance in touch panels:

| | |
|---|---|
| Kawashima et al. | USPGPUB 2002/0092746 |
| Boyd et al. | USPGPUB 2002/0145593 |
| Kawashima et al. | USPGPUB 2003/0011720 |
| Chosa | USPGPUB 2004/0080483 |

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.A.
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1/18/06

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